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ABSTRACT

The goal of this study was to discover the sources of stress in elementary school teachers in the Caribbean. The study sought the answers to three questions which focus on teachers' perceptions of: (1) the most stressful classroom activity/condition; (2) differences in sources of stress between male and female teachers; and (3) differences in sources of stress among teachers across eight Caribbean territories. The subjects were 645 elementary school teachers (310 males and 335 females) from 8 Caribbean territories--Antigua (N=63), Barbados (N=103), British Virgin Islands (N=40), Dominica (N=113), Grenada (N=67), Montserrat (N=65), St. Kitts (N=93), and St. Vincent (N=101). Answers to the research questions were sought by means of the Teacher Stress Inventory which contains seven scales: role ambiguity; role stress; organizational management; job satisfaction; life satisfaction; task stress; and supervisory support. Task stress emerged as the major source of stress for the teachers. Male teachers showed higher levels of stress on role stress and life satisfaction. Differences emerged among territorial subsamples on two of the seven measures: organizational management and supervisory support. On the organizational management measure, teachers from St. Vincent and Barbados scored higher than their counterparts in Montserrat and Dominica; Vincentian Teachers achieved a higher score on this measure than their peers in the British Virgin islands and Grenada. With respect to supervisory support, teachers from Antigua, Barbados, St. Vincent, and St. Kitts indicated the highest levels of stress. (Contains 18 references.) (SPM)

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Stress In Teaching: A Study Of Elementary School Teachers In The Caribbean

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Summary

The Teacher Stress Inventory was administered to 645 elementary school teachers (310 males and 335 females) from eight Caribbean territories. Sex differences were noted on Role Stress and Life Satisfaction with male teachers reporting a higher level of stress on each measure. Differences also emerged among territorial subsamples on two of the seven measures - Organizational Management and Supervisory Support. On the Organizational Management measure teachers from St Vincent and Barbados scored higher than their counterparts in Montserrat and Dominica. Vincentian teachers also achieved a higher score on this measure than their peers in the British Virgin Islands and Grenada. With respect to Supervisory Support, teachers from Antigua, Barbados, St. Vincent, and St. Kitts indicated a higher level of stress than teachers from Dominica. The level of stress reported by teachers from Montserrat on this measure was also significantly lower than that of their counterparts in Antigua, Barbados and St. Vincent.

Inquiry into sources of stress in the teaching profession has engaged the attention of research psychologists over the last two decades. This interest has been fueled by the realization that stress, defined as the product of a complex transaction between individual needs/resources and environmental demands and constraints (Handy, 1986), often manifests itself in physical and psychologically related health problems among teachers. Cooper (1986) identified coronary artery disease, fatigue, headaches, insomnia, and nervous tension as examples of physical health problems while Pierce and Mallory (1990) highlighted high anxiety, depression, irritability and hostility, emotional exhaustion and burnout as some of the psychological problems associated with stress. Health and psychological outcomes can also lead to poor teaching performance, lowered self-esteem, poor job satisfaction, increased absenteeism, poor decision making and bad judgement (Pithers and Fogarty, 1995).

Studies on teacher stress have been mounted in many and varied teaching/learning environments. Pettegrew and Wolf (1982) working with a North American sample, theorized stress as arising from three conceptually different sources. (a) Task/events stress - which stems from the variety of specific tasks which teachers perform as part of their duties (b) role-

related stress - which is associated with the degree of congruity between the teacher's expectations of his/her teaching role and the actual teaching experiences and (c) work/events stress - which are specific events that teachers experience while performing their duties. Otto (1986) in research work with samples of Australian teachers, has indicated stressors in the area of the work role, role conflict and ambiguity, lack of recognition, poor physical environment and resources, lack of control and decision-making power, poor communication and the emotional demands of teaching. Findings from research work conducted in New Zealand (Manthei and Solman, 1988) pointed to seven stress factors. These were identified as pupil recalcitrance, poor remuneration, curriculum demands, low professional recognition, poor working conditions, community antagonism, and time demands. Stressors of a similar nature were also reported in research work mounted in Britain (Brown and Ralph 1992; Fontana and Abouserie 1993).

Although the literature is replete with research findings on teacher stress (Kyriacou, 1987; Hart, Wearing and Conn,1995; Boyle, Borg, Falzon and Baglioni 1995), research work utilizing samples of Caribbean teachers is sparse (Andrews, 1980; Payne and Furnham, 1987). This study is therefore designed to inquire

into the sources of stress as perceived by elementary school teachers in the Eastern Caribbean. Answers will be sought to the following questions:

(1) What activity/condition within the teaching/learning environment is perceived to be most stressful among Caribbean elementary school teachers?

(2) Are there any significant differences between Caribbean male and female elementary school teachers with respect to their identifiable sources of stress?

(3) Are there any significant differences among elementary school teachers across select Caribbean territories with respect to their identifiable sources of stress?

Method

Subjects

The sample comprised 645 elementary school teachers (310 males and 335 females selected from elementary schools in eight Caribbean territories (Antigua N= 63; Barbados N = 103; British Virgin Islands N = 40; Dominica N = 113; Grenada N = 67; Montserrat N = 65; St. Kitts N = 93; and St. Vincent N = 101). The subjects had an average of 9.6 years teaching experience and an average age of 26.3 years.

Instrument

The 36-item Teacher Stress Inventory (TSI) (Schutz and Long, 1988) was employed to assess perceived sources of stress among the sample of teachers. The inventory, which emerged out of a revision of the earlier work of Pettegrew and Wolf (1982), contains seven scales, namely Role Ambiguity, (examples of items: "I am unclear on what the scope and responsibilities of my job are", "I am uncertain what the criteria for evaluating my performance actually are") Role Stress, (examples of items:"I find that I have extra work beyond what should normally be expected

of me", "I receive conflicting demands from two or more people or groups in the school setting") Organizational Management, (examples of items: "I have influence over what goes on in my school", "My administrative head asks my opinion on decisions that directly affect me") Job Satisfaction, (examples of items:"All in all, I would say that I am extremely satisfied with my job", "My job is extremely important in comparison to other interests in my life") Life Satisfaction, (examples of items: "I currently find my life very rewarding", "I currently find my life very enjoyable") Task Stress, (examples of items: "Trying to keep my work from being too routine and boring puts a lot of stress on me", "Trying to complete reports and paper work on time causes me a lot of stress") and Supervisory Support (examples of items: "When I really need to talk to my administrative head,(s)he is willing to listen", "My administrative head stands up to outsiders for the people (s)he supervises"). Responses on this 5-point measure can range from "strongly disagree" to "strongly agree". Positively phrased items were reversed-scored for analysis so that a score of 5 represented high stress. Further details about the development, validity and reliability of the TSI are given in Schutz and Long (1988).

Results

Item means and standard deviations for the total sample on the Teacher Stress Inventory are presented in Table 1.

Table 1 near here

It is noted from the table that items which achieved a mean rating higher than 3.00 (Items 6; 12; 27; and 28) and as such generated most stress, are all related to task/environmental factors associated with teaching. Least stress, as determined by mean ratings less than 2.00, was generated by those items which tapped "personal" factors (for example, items 23, 25, and 33).

Means and standard deviations were also computed on the factors of the Teacher Stress Inventory for the total sample, male and female subsamples and for territorial subsamples. Results are displayed in Table 2.

Table 2 near here

It is noted from the table that of the seven factors of stress measured by the inventory, Task Stress was rated as being the most stressful by the teachers. This was followed in rank order by Job Satisfaction, Role Stress, Role Ambiguity, Organizational Management, Supervisory Support and Life Satisfaction.

The 't' statistic was applied to the mean scores obtained by the males and females in the sample to determine whether any significant differences existed between the two groups on the Teacher Stress Inventory. Differences emerged on two factors - Role Stress ('t' = -2.19 $p < .05$) and Life Satisfaction ('t' = -2.17 $p < .05$). In both cases the perceived level of stress of the male teachers was higher than that of their female counterparts.

Differences among the territorial subsamples (Antigua,Barbados, British Virgin Islands, Dominica, Grenada, Montserrat, St. Kitts, St. Vincent) scores on the Teacher Stress Inventory were examined using one-way analysis of variance. Significant differences emerged on two factors - Organizational Management ($F_{7,637} = 10.02$, $p < .0001$) and Supervisory Support ($F_{7,637} = 13.10$ $p < .0001$). Analysis of the differences in means using the Scheffe method of multiple comparisons show that, in the case of Organizational Management, teachers

in St. Vincent (M = 2.78) and Barbados (M = 2.64) experienced a higher level of stress than teachers in Montserrat (M = 2.01) and Dominica (M = 2.01). The perceived stress level of teachers in St. Vincent on this measure was also significantly higher when compared with that of their counterparts in both the British Virgin Islands (M = 2.17) and Grenada (m = 2.23). With respect to Supervisory Support, teachers from Antigua (M = 2.53), Barbados (M = 2.41), St. Vincent (M = 2.38), and St. Kitts (M = 2.26) experienced higher levels of stress than teachers from Dominica (M = 1.69). The level of stress experienced by teachers in Montserrat (M = 1.84) on this measure was also significantly lower than that experienced by fellow teachers in Antigua, Barbados and St. Vincent.

Factor Analysis

The data collected were also subjected to the principal components analysis of the SPSS program. In each case factors with eigenvalues equal to or greater than 1.00 were subsequently rotated using the VARIMAX criterion. Loadings of 0.44 or above were deemed significant.

Eight factors were extracted accounting for 57.4 percent of the total variance. These were identified as follows: Factor 1 - Task Stress: (Items 27, 28, 29, 30, 31, 32) eigenvalue 8.19 accounting for 22.8 percent of the variance. Factor 2- Supervisory Support: (Items 33, 34, 35, 36) eigenvalue 3.24 accounting for 9.0 percent of the variance; Factor 3 - Life Satisfaction: (Items 22, 23, 24, 25, 26) eigenvalue 2.37 accounting for 6.6 percent of the variance; Factor 4 - Management Style (Items 13, 14, 15, 20, 21) eigenvalue 1.76 accounting for 4.9 percent of the variance; Factor 5 - Role Conflict: (Items 16, 17, 18, 19) eigenvalue 1.53, accounting for 4.3 percent of the variance; Factor 6 - Job Satisfaction: (Item 8, 9, 10, 11, 12) eigenvalue 1.37 accounting for 3.8 percent of the variance; Factor 7 - Role Ambiguity: (Items 1, 2, 3, 4, 5) eigenvalue 1.13,

accounting for 3.2 percent of the variance; and Factor 8 - Role Overload: (Items 6, 7) eigenvalue 1.03, accounting for 2.9 percent of the variance.

Although names similar to those of Pettlegrew and Wolf (1982) and Schutz and Long (1988) were retained for identification of the factors, it should be noted that even though items for the most part loaded on similarly named factors, the order in which the said factors emerged in this study was entirely different from that for both previous studies. While Pettegrew and Wolf (1982) and Schutz and Long (1988) indicated a factor structure of nine and seven factors respectively, it is noted that for this Caribbean sample, eight factors of teacher stress have emerged.

Discussion

The fact that Task Stress emerged as the major source of stress among Caribbean teachers may be explained in terms of the many and varied demands of teaching within the Caribbean region and also the general working conditions under which teachers are expected to function. (Richardson 1987).

With respect to sex differences in perceived sources of stress among teachers, it is noted that male teachers rated both Role Stress and Life Satisfaction as being more stressful for them when compared with their female counterparts. This finding supports the general view (Smith,1986) that teaching at the elementary school level is a job more suitable for females. It may be possible that a number of those males who enter the teaching profession may be forced to do so because of limited job opportunities in their preferred fields and, as a result, may inculcate feelings of negativity towards their own role within the classroom and their current forced choice of teaching as a career. Such an attitude may be become "self fulfilling " resulting in both role stress and life satisfaction stress.

Comparisons among the territorial samples point to significant differences in teacher stress related to Organizational Management and Supervisory Support. In the case of Organizational Management, teachers in St. Vincent and Barbados report a level of stress that is significantly higher than that experienced by teachers in Montserrat and Dominica. Vincentian teachers also scored significantly higher on this measure when compared with teachers from the British Virgin

Islands and Grenada. These findings seem to suggest that Vincentian, and to a lesser extent Barbadian teachers are somewhat alienated from the decision making process at the school level. With respect to Supervisory Support, teachers from Antigua, Barbados and St. Vincent report a significantly higher level of stress than teachers from Dominica and Montserrat. The stress level of teachers in St Kitts is also higher than that of their peers in Dominica. Findings in this area clearly point to the need for training of school principals and senior management staff in the area of educational management and school supervision. Principals as well as practicing elementary school teachers should also be exposed to organized stress management programmes. One such programme "stress inoculation training" utilizes both emotion - focused and problem-focused coping strategies (Hohn, 1995). The approach proposes to teach individuals to use a three-phase procedure to cope with stressors on the cognitive, physiological, and behavioral levels. The first phase is ***educational***; it consists of discussions of the nature of the stress reaction, how the stressor is experienced and what the individual is thinking when confronted by it. Models of alternative thoughts and behaviors following the stress reaction are presented. In the second or ***rehearsal phase***, specific coping strategies are taught including relaxation techniques to combat

the physiological reaction. Self statements designed to help redefine the meaning of the stressful event and indicate effective functioning in a different manner are introduced. Self statements which serve to aid in the reevaluation of the threat, lead to more adaptive actions. The third phase, *application*, involves trying out the new strategies on actual stressors, usually progressing from least distressing to most distressing events. Exposure to such training should assist in the alleviation of teacher stress at the work place.

Findings emanating from the factor analysis point to dissimilarity among Caribbean and North American teachers with respect to their perceptions of the nature of the task of teaching. "Task Stress" it is noted, loaded as Factor I in this research and as Factor 8 in the work of Pettegrew and Wolf (1982) and Schutz and Long (1988).

Although 'task' considerations may not be given high priority rating among teachers within a North American context, the nature of the learning environment within the Caribbean, characterized as it is by large class size, insufficient materials and supplies, inadequate school equipment, and lack of spare

time, (Richardson, 1987) may contribute significantly to the stress experienced by practicing teachers in the Caribbean.

While further research in this area may be necessary, the overall findings show that the major sources of stress for teachers functioning within teaching/learning environments of the Caribbean are in many ways similar to stressors identified by teachers in other areas of the world.

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TABLE 1

ITEM MEANS AND STANDARD DEVIATIONS ON THE TEACHER STRESS INVENTORY FOR THE TOTAL SAMPLE (N = 645)

No.	ITEMS	TOTAL SAMPLE N = 645	
		M	SD
1.	I can predict what will be expected of me in my work tomorrow.	2.37	1.04
2.	I am unclear on what the scope and responsibilities of my job are.	2.07	1.06
3.	I am uncertain what the criteria for evaluating my performance actually are.	2.89	1.24
4.	I receive enough information to carry out my job effectively.	2.47	1.07
5.	When asked, I am able to tell someone exactly what the demands of my job are.	2.20	1.00
6.	I find that I have extra work beyond what should normally be expected of me.	3.22	1.29
7.	The criteria of performance for my job are too high.	2.54	0.96
8.	I am given too much responsibility without adequate authority to carry it out.	2.59	1.18
9.	I receive conflicting demands from two or more people or groups in the school setting.	2.23	1.11
10.	I have to buck a rule or policy in order to carry out an assignment.	2.40	1.04
11.	I have a hard time satisfying the conflicting demands of students, parents, administrators and teachers.	2.78	1.24
12.	I am given school-related duties without adequate resources and materials to carry them out.	3.31	1.32
13.	I have influence over what goes on in my department (secondary) or school (elementary).	2.64	1.11
14.	I'm informed of important things that are happening in my department (secondary) or school (elementary).	2.12	1.00
15.	My administrative head asks my opinion on decisions that directly affect me.	2.41	1.12
16.	All in all, I would say that I am extremely satisfied with my job.	2.87	1.12
17.	My job is extremely important in comparison to other interests in my life.	2.12	1.01
18.	Knowing what I know now, if I had to decide all over again whether to take this job, I would definitely do so.	2.68	1.23

No.	ITEMS	TOTAL SAMPLE N = 645	
		M	SD
19.	In general, my job measures up extremely well with the sort of job I wanted before I took it.	2.88	1.18
20.	My administrative head brings me together with other faculty in joint meetings to make decisions and solve common problems.	2.35	1.15
21.	My administrative head gives me full information about the things which directly involve my work.	2.39	1.10
22.	I currently find my life very rewarding.	2.23	0.99
23.	My life is currently quite lonely.	1.84	1.00
24.	I currently find my life quite enjoyable.	2.05	0.92
25.	I currently find my life quite boring.	1.71	0.91
26.	My life is currently very hopeful.	1.98	0.88
27.	Trying to complete reports and paper work on time causes me a lot of stress.	3.17	1.24
28.	I find that dealing with student discipline problems puts a lot of stress on me.	3.35	1.23
29.	There is a lot of stress just keeping up with changing professional standards.	2.97	1.08
30.	Trying to keep my work from being too routine and boring puts a lot of stress on me.	2.87	1.16
31.	Having to participate in school activities outside of the normal working hours is very stressful to me.	2.69	1.17
32.	I find that trying to be attentive to the problems and needs of fellow faculty is very stressful.	2.53	0.99
33.	When I really need to talk to my administrative head,(s)he is willing to listen.	1.87	0.89
34.	My administrative head pays attention to what I am saying.	1.99	0.87
35.	My administrative head stands up to outsiders for the people (s)he supervises.	2.28	1.00
36.	When I have conflicts with parents or students my administrative head gives me the kind of support I need.	2.12	0.96

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Table 2

Means and Standard Deviations on the Teacher Stress Inventory for the Total Sample, Male and Female Subsamples and Territorial Subsamples

TEACHER STRESS INVENTORY MEASURES	TOTAL SAMPLE		MALES		FEMALES		TERRITORIAL SUBSAMPLES													
							Antigua		Barbados		B.V.I		Dominica		Grenada		Montserrat		St. Kitts		St. Vincent	
	(N = 645)		(N = 310)		(N = 335)		(N = 63)		(N = 103)		(N = 40)		(N = 113)		(N = 67)		(N = 65)		(N = 93)		(N = 101)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Role Ambiguity	2.39	.79	2.38	.76	2.39	.80	2.44	.85	2.46	.77	2.27	.75	2.18	.67	2.20	.82	2.60	.80	2.46	.75	2.46	.80
Role Stress	2.72	.81	2.79	.81	2.65	.80	2.87	.81	2.72	.84	2.67	.76	2.53	.73	2.82	.91	2.75	.86	2.78	.77	2.71	.79
Organizational Management	2.37	.89	2.33	.89	2.39	.88	2.50	.93	2.04	1.02	2.17	.67	2.01	.61	2.23	.74	2.01	.76	2.35	.84	2.78	1.00
Job Satisfaction	2.76	.90	2.80	.90	2.70	.88	3.03	1.03	2.86	.79	2.62	.77	2.51	.82	2.79	1.00	2.69	.86	2.78	.94	2.79	.89
Life Satisfaction	1.98	.77	2.04	.79	1.91	.73	1.95	.81	2.00	.76	1.87	.64	1.89	.71	2.07	.95	2.13	.70	2.02	.77	1.89	.74
Task Stress	3.00	.88	3.00	.86	3.00	.89	3.04	.90	3.08	.87	3.12	.91	2.82	.86	3.17	.91	2.96	.82	2.97	.87	2.98	.87
Supervisory Support	2.16	.82	2.14	.78	2.17	.85	2.53	.94	2.41	.83	2.07	.85	1.69	.56	2.07	.68	1.84	.75	2.26	.82	2.38	.74

*Revised Version Included

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